PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Arrangement of Core Segments in the Casings of Dynamo Electric Machines, Rotary Transformers and the like.

We, SIEMENS-SCHUCKERTWERKE AKTIENGESELLSCHAFT, a German Company, of Berlin-Siemensstadt, Germany, Assignees of SIEMENS-SCHUCKERTWERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, a German Company, of Berlin-Siemensstadt, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The building up the cores of dynamo electrical machines, rotary transformers and the like from individual core plate segments which are rigidly fixed within their frame or casing by means of one or more fastenings is known. This arrangement possesses, especially in the case of large machines, great disadvantages as by reason of the heating of the core body, the individual segments tend to expand, but are prevented from doing so by the rigid arrangement of the fastening means. In dynamo electric machines it has been proposed to rigidly dovetail the segments to the hub at their centres or between their ends and provide radial gaps separating the segments from each other.

According to the present invention the segments are arranged on their fastening means in such a way that they are allowed a tangential play on said fastening means.

In carrying out the invention, in order to prevent an arbitrary displacement of the segments, they are not allowed a play on all the fastenings, but are rigidly fixed on some of the latter. It is especially advantageous to fix the segments rigidly at their centre, but to arrange their extremities on their fastenings in such a manner that they have a tangential play. For the purpose of making easy the assembly of the core body, the segments may be previously assembled to form individual packs and then fastened in the frame with an overlap in the above described manner. In the case of dynamo electrical machines this method of fastening may be used for the stator and rotor cores.

The accompanying drawing shows an embodiment of the invention by way of example as applied to a part of the stator core body of a dynamo electrical machine. The core body is here fastened on to T shaped cross pieces t_1, t_2, t_3 which are part of the stator frame which for the sake of simplicity is not shown. The centre of the individual core plates is rigidly fixed on the cross piece t_2, whereas the extremities of the core plates on the cross pieces t_1 and t_3 have tangential play. In the embodiment shown the packs p overlap one another. The individual core plates b are appropriately held together in the axial direction by means of rivets.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Arrangement of core plate segments in dynamo electric machines, rotary transformers and the like, characterised by the fact that the segments are seated with a tangential play on the means for fastening them.

2. Arrangement according to claim 1, characterised by the fact that the segments are rigidly fixed on certain of their fastenings.

3. Arrangement according to claim 2, characterised by the fact that the segments are rigidly fixed in their centre.

4. Arrangement according to claims 1 to 3, characterised by the fact that the core plate segments are assembled to form packs which are staggered in relation to one another.

5. Core plate segment arrangement for dynamo electric machines, rotary transformers and the like, substantially as hereinbefore described with reference to the accompanying drawing.

Dated this 19th day of June, 1928.

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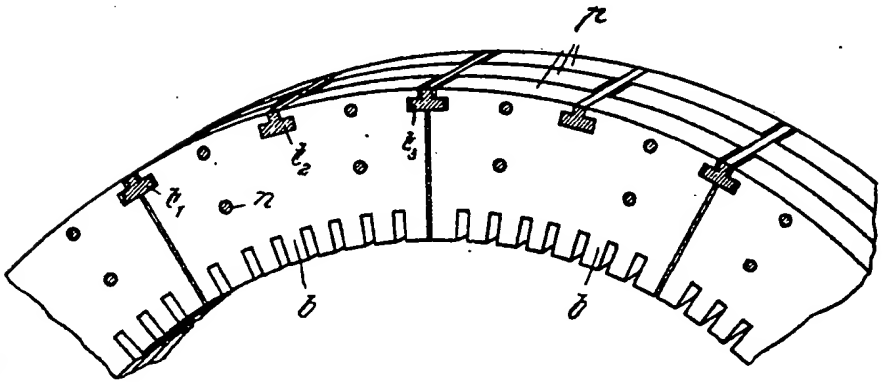

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